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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/924,719	08/09/2001	Pascal Agin	Q65717	3974

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EXAMINER	
HAILE, FEBEN	
ART UNIT	PAPER NUMBER
2616	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/10/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	09/924,719	AGIN ET AL.	
	Examiner	Art Unit	
	Feben M. Haile	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 January 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) *19,20,22 and 23* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18, 21, 24-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In view of applicant's amendment filed January 18, 2007, the status of the application is still pending with respect to claims 1-30.

2. The amendment is sufficient to overcome the Andersson et al. (US 6,434,380) reference. However, upon further consideration, a new ground(s) of rejection is made in view of a further interpretation of Fapojuwo (US 6,330,232) and newly discovered reference Vanghi (US 6,393276).

Claim Objections

3. Claims 2 and 6 objected to because of the following informalities:

Regarding claim 2, the first occurrence of the limitation "the number of radio links" does not have sufficient antecedent.

Regarding claim 6, the limitation " for established radio links " does not have sufficient antecedent because the radio links are not established until claim 2.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-3, 5, 14, 21, 24, and 28-30 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Fapojuwo (US 6,330,232), hereinafter referred to as Fapojuwo.

Regarding claims 1 and 24, Fapojuwo discloses a method of selecting a CDMA Base Station Transceiver Subsystem from a plurality of Base Station Transceiver Subsystems to handle a call in a cellular telephone network in response to a call request **(figure 1 units 20, 22 & 16 and column 1 lines 41-46; a CDMA Interconnect Subsystem and Base Station Transceiver Subsystems)**, said base station signaling to said base station controller one or more limits related to said processing capacity **(column 1 lines 47-48; the CIS receives a representation of available call capacity from each BTS)**, wherein said one or more limits correspond to one or more parameters representative of said traffic load **(column 1 line 66-column 2 line 5; available call capacity includes power to support calls)**; and said base station controller verifying, for said one or more parameters, if said corresponding limit has been reached **(column 2 lines 35-42; enabling the BTS with the greatest available call capacity to handle the call)**.

Regarding claim 2, Fapojuwo discloses wherein one of said parameters is associated with the number of radio links that can be established and a corresponding limit is represented by a maximum number of radio links that can be established **(column 2 line 48-column 3 line 5; using a maximum allowable transmit power and a plurality of channels in estimating available call capacity)**.

Regarding claim 3, Fapojuwo suggest wherein radio links that can be established in marcodiversity **(figure 1; two cell sites connect to one CIS in order to transmit information to one Mobile Telephone Exchange)**.

Regarding claim 5, Fapojuwo discloses wherein said maximum number of radio links is represented by a maximum number of radio resources that can be allocated **(column 2 line 48-column 3 line 5; using a maximum allowable transmit power and a plurality of channels in estimating available call capacity)**.

Regarding claim 14, Fapojuwo discloses wherein said limits are considered on a per cell or a per base station basis **(column 1 lines 47-52; determining which base station transceiver subsystem has the greatest available call capacity for handling a call)**.

Regarding claim 21, Fapojuwo discloses selecting a CDMA Base Station Transceiver Subsystem from a plurality of Base Station Transceiver Subsystems to handle a call in a cellular telephone network in response to a call request **(figure 1 units 20, 22 & 16 and column 1 lines 41-46; a CDMA Interconnect Subsystem and Base Station Transceiver Subsystems)** means for signaling one or more limits in its processing capacity to a base station controller that controls said base station **(column 1 lines 47-48; the CIS receives a representation of available call capacity from each BTS)**, said limits corresponding to one or more parameters representative of traffic load's **(column 1 line 66-column 2 line 5; available call capacity includes power to support calls)** and means for receiving traffic control signals from said base station controller said traffic control signals being determined according to said limits

(column 2 lines 35-42; enabling the BTS with the greatest available call capacity to handle the call).

Regarding claims 28-30, Fapojuwo discloses wherein said one or more limits comprise a plurality of limits related to processing capacity, each limit corresponding to a different parameter **(column 2 line 48-column 3 line 5; in estimating available call capacity a maximum allowable transmit power, pilot power, LoCall blocking threshold power, and a plurality of channels is used)**.

5. Claims 4 and 15-18 rejected under 35 U.S.C. 103(a) as being unpatentable over Fapojuwo (US 6.330,232), hereinafter referred to as Fapojuwo, in view of Hottinen et al. (US 2002/0012380), hereinafter referred to as Hottinen.

Regarding claim 4, Fapojuwo disclose the limitations of base claim 2.

Fapojuwo fails to explicitly suggest wherein radio links that can be established in transmission diversity.

Hottinen teaches the use of transmit diversity **(page 1 paragraph 0004)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the transmission diversity taught by Hottinen into the CDMA Cellular Architecture disclosed by Fapojuwo. The motivation for such a modification is to provide more reliable transmissions by eliminating signal fading on a radio path.

Regarding claim 15, Fapojuwo discloses the limitations of base claim 1.

Fapojuwo fails to teach the limitation wherein said limits are considered per physical channel.

Hottinen discloses that the measurement of channel quality is related to channel conditions such as channel parameters, power, or bit error rate **(page 5 column 0064)**.

It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the physical channels taught by Hottinen into the CDMA Cellular Architecture disclosed by Fapojuwo. The motivation for such a modification is to provide an enhanced method of transmission by allowing for the option of choosing between transmitting data either to all subscribers or subscriber-specific units.

Regarding claim 16, Fapojuwo discloses the limitations base claim 1.

Fapojuwo fails to teach the limitation wherein said limits are considered per type of physical channel.

Hottinen discloses that the measurement of channel quality is related to channel conditions such as, power, bit error rate, etc...**(page 5 column 0064)** and that physical channels are divided into different types **(page 3 paragraph 0037)**.

It would have been obvious to one having ordinary skill in the art at the time of the invention to incorporate the physical channels taught by Hottinen into the CDMA Cellular Architecture disclosed by Fapojuwo. The motivation for such a modification is to provide an enhanced method of transmission by allowing for the option of choosing between transmitting data either to all subscribers or subscriber-specific units.

Regarding claim 17, Hottinen discloses wherein one type of physical channel is a dedicated physical channel **(page 3 paragraph 0037)**.

Regarding claim 18, Hottinen discloses wherein one type of physical channel is a common physical channel **(page 3 paragraph 0037)**.

6. Claims 6-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fapojuwo (US 6,330,232), hereinafter referred to as Fapojuwo, in view of Vanghi (US 6,393276), hereinafter referred to as Vanghi.

Regarding claim 6, Fapojuwo discloses the limitations of base claim 1.

Fapojuwo fails to suggest wherein one of said parameters is associated with data rate for established radio links and a corresponding limit is represented by a maximum data rate for the established radio links.

Vanghi teaches a base station controller interrogating base stations for current forward link load estimates and decides on a number of traffic channel connections and their data rates to be allocated **(column 5 lines 54-59)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of forward link power and rate control taught by Vanghi into the CDMA Cellular Architecture disclosed by Fapojuwo. The motivation for such a modification is treating traffic channel data rate and power control together increases efficiency of the system thereby enhancing service quality.

Regarding claim 7, Vanghi further discloses forward and reverse links but directs his/her invention towards establishing traffic channel connections in the forward direction **(column 5 lines 16-28)**.

However Vanghi fails to explicitly suggest wherein said maximum data rate is a maximum data rate in the up direction.

It would have been obvious at the time the invention was made that the traffic channel connections could also be established in the reverse direction.

Regarding claim 8, Vanghi discloses wherein said maximum data rate is a maximum data rate in the down direction **(column 5 lines 16-28; invention directed to establishing traffic channel connections in a forward direction)**.

7. Claims 9-13 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fapojuwo (US 6,330,232), hereinafter referred to as Fapojuwo, in view of Vanghi (US 6,393276), hereinafter referred to as Vanghi, in view of Hottinen et al. (US 2002/0012380), hereinafter referred to as Hottinen.

Regarding claim 9, Fapojuwo and modified by Vanghi disclose the limitations of base claim 6.

Fapojuwo, Vanghi, and/or their combination fail to explicitly suggest where an error correcting code is used for a first type of traffic.

Hottinen discloses different services, such as speech, data, and moving or still video images, require different coding means **(page 3 paragraph 0040)** using an encoder for packets arriving at a radio network subsystem **(figure 2A unit 202 and page 3 paragraph 0041)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the coding feature taught by Hottinen into the CDMA Cellular Architecture disclosed by Fapojuwo as modified by the method of forward link power and rate control suggested by Vanghi into the CDMA Cellular Architecture disclosed by Fapojuwo. The motivation for such a modification is to provide an enhanced method for the addition of redundancy into data thus protecting against transmission errors.

Regarding claim 10, Fapojuwo and modified by Vanghi disclose limitations of base claim 6.

Fapojuwo, Vanghi, and/or their combination fail to explicitly suggest where an error correcting code is used for a second type of traffic.

Hottinen discloses different services, such as speech, data, and moving or still video images, require different coding means **(page 3 paragraph 0040)** using an encoder for packets arriving at a radio network subsystem **(figure 2A unit 202 and page 3 paragraph 0041)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the coding feature taught by Hottinen into the CDMA Cellular Architecture disclosed by Fapojuwo as modified by the method of forward link power and rate control suggested by Vanghi into the CDMA Cellular Architecture disclosed by Fapojuwo. The motivation for such a modification is to provide an enhanced method for the addition of redundancy into data thus protecting against transmission errors.

Regarding claim 11, Hottinen discloses wherein a first type of error correction code is a turbo-code **(page 3 paragraph 0041)**.

Regarding claim 12, Hottinen discloses wherein a second type of error correcting code is a convolutional code **(page 3 paragraph 0041)**.

Regarding claim 13, Fapojuwo and modified by Vanghi disclose limitations of base claim 6.

Fapojuwo, Vanghi, and/or their combination fail to explicitly suggest wherein said data rate is a net data rate.

Hottinen teaches a method of spreading a channel with a code **(page 3 paragraph 034)** where a data transfer rate depends on the channel coding used **(page 3 paragraph 0035)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the coding feature taught by Hottinen into the CDMA Cellular Architecture disclosed by Fapojuwo as modified by the method of forward link power and rate control suggested by Vanghi into the CDMA Cellular Architecture disclosed by Fapojuwo. The motivation for such a modification is to provide an enhanced method for the addition of redundancy into data thus protecting against transmission errors.

Regarding claims 25-27, Fapojuwo discloses wherein said processing capacity limits comprise a maximum number of radio links that can be established **(column 2 line 48-column 3 line 5; using a maximum allowable transmit power and a plurality of channels in estimating available call capacity)**,

Fapojuwo fails to explicitly suggest a first maximum data rate for a first type of traffic and a second maximum data rate for a second type of traffic.

Vanghi teaches a base station controller interrogating base stations for current forward link load estimates and decides on a number of traffic channel connections and their data rates to be allocated **(column 5 lines 54-59)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the method of forward link power and rate control taught by Vanghi into the CDMA Cellular Architecture disclosed by Fapojuwo. The motivation for such a modification is treating traffic channel data rate and power control together increases efficiency of the system thereby enhancing service quality.

Fapojuwo, Vanghi, and/or their combination fail to suggest a first type and a a second type of error correcting code is used.

Hottinen discloses different services, such as speech, data, and moving or still video images, require different coding means **(page 3 paragraph 0040)** using an encoder for packets arriving at a radio network subsystem **(figure 2A unit 202 and page 3 paragraph 0041)**.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate the coding feature taught by Hottinen into the CDMA Cellular Architecture disclosed by Fapojuwo as modified by the method of forward link power and rate control suggested by Vanghi. The motivation for such a modification is to provide an enhanced method for the addition of redundancy into data thus protecting against transmission errors.

Response to Arguments

8. Applicant's arguments filed January 18, 2007 have been fully considered but are partially not persuasive.

The Applicant respectfully traverses the available call capacity disclosed by Fapojuwo is not a limit as suggested by the claimed language. The Examiner respectfully disagrees with the Applicant. The definition of a limit is a threshold beyond which something cannot proceed. The available call capacity suggests a threshold for which base station can handle a call. Therefore as the claims are interpreted in their broadest sense, the Examiner believes that Fapojuwo indeed does render the Applicant's invention obvious because the call capacity is a type of limit.

9. Applicant's arguments filed January 18, 2007, have been fully considered and are partially persuasive. The Andersson et al. (US 6,434,380) reference does not disclose, teach, or fairly suggest the claimed invention. Therefore, the rejections in view of this reference have been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Vanghi (US 6,393276).

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Feben M. Haile whose telephone number is (571) 272-3072. The examiner can normally be reached on 6:00am - 3:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on (571) 272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

03/22/2007

KWANG BIN YAO
SUPERVISORY PATENT EXAMINER